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DOCKET NO. D-2007-002 CP-2

DELAWARE RIVER BASIN COMMISSION

**East Brandywine Township Municipal Authority
Wastewater Treatment Plant
East Brandywine Township, Chester County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) by Hydraterra Professionals, LLC, on behalf of the East Brandywine Township Municipal Authority (EBTMA or docket holder) on November 9, 2012 (Application), for the renewal of an existing wastewater treatment plant. The Pennsylvania Department of Environmental Protection (PADEP) issued Water Quality Management (WQM) Permit No. 1506407 for this project on October 31, 2012. National Pollutant Discharge Elimination System (NPDES) Permit No. PA0244333 for this project was approved by PADEP on May 23, 2012, effective until May 31, 2017.

The Application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Chester County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on March 5, 2013.

A. DESCRIPTION

1. Purpose. The purpose of this project is to renew the approval of the docket holder's existing 0.3 million gallons per day (mgd) Applecross WWTP. The flow of the WWTP has been limited to an average of 0.138 mgd in the PADEP WQM Permit. Treated effluent is land applied via spray irrigation and drip disposal beds located at the Applecross Golf Course and/or stream discharged. The Applecross WWTP was approved via Docket No. D-2007-2 CP-1 on September 26, 2007; however the docket holder did not submit an application for renewal prior to the docket expiration date of September 26, 2012.

2. **Location.** The project WWTP and appurtenant facilities are located near the intersection of East Reeceville and Bollinger Roads in East Brandywine Township, Chester County, Pennsylvania. Treated effluent from the WWTP will continue to be disposed through one or any combination of the following options: 1) Re-use of treated effluent via spray irrigation at the Applecross Country Club, 2) land discharge through two drip irrigation fields, and 3) surface water discharge. The surface water discharge is to Beaver Creek at River Mile 70.73 – 1.77 – 20.22 – 8.7 – 6.1 (Delaware River – Christina River – Brandywine Creek – East Branch Brandywine Creek – Beaver Creek) via Outfall No. 001.

The project discharges are located in the Brandywine-Christina Watershed as follows:

DISCHARGE	LATITUDE (N)	LONGITUDE (W)
Outfall 001	40° 01' 44"	75° 46' 39"
Drip Field Location	40° 01' 35"	75° 47' 00"
Golf Course Location	40° 01' 50"	75° 46' 37"

3. **Area Served.** The WWTP was designed to serve two residential developments (Applecross and Weaver Farm) and provide excess capacity for township use from the general service area within East Brandywine Township, Chester County, Pennsylvania. However, at the present time, only the Applecross development is being served by the WWTP as the Weaver Farm development plans were withdrawn. The docket holder indicated that should land development be proposed in the future at the Weaver Farm, the property will be served by the WWTP.

For the purpose of defining the Area Served, sections B (Type of Discharge) and D (Service Area) of the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. **Physical features.**

a. **Design criteria.** The Applecross WWTP treats domestic sanitary wastewater utilizing a sequencing batch reactor (SBR) and tertiary filtration processes. The WWTP is currently permitted for an average flow of 0.138 mgd; however the plant was designed to accommodate 0.3 mgd.

The treated effluent is disposed of primarily by land application as part of a golf course spray irrigation system. The effluent is conveyed to three storage lagoons with a total storage volume of approximately 20.34 million gallons and used by the irrigation system during the growing season (generally April through November) when wind velocities are less than 15 miles per hour. During the non-growing season, the treated wastewater is stored in the lagoons. The facility also includes two drip disposal areas and a stream discharge outfall in order to manage and dispose of excess effluent if the need arises.

b. **Facilities.** The Applecross WWTP consists of an influent pump station, an influent screen, an equalization tank, an SBR treatment system (three trains, 100,000 gallons each, two of which equipment has been installed), a decant equalization tank, a tertiary filter, an

ultra-violet disinfection system, a filtrate tank, a sludge holding tank, three storage lagoons, a control building with chemical feed equipment, a spray irrigation system located on the Applecross Golf Course, and a drip irrigation system.

The project facilities are located outside the 100-year floodplain.

Wasted sludge will continue to be hauled off-site by a licensed hauler for deposit at a State approved facility.

c. **Water withdrawals.** The potable water supply in the project service area is supplied by Aqua Pennsylvania, as described in Docket No. D-2003-033 CP, approved on April 21, 2004.

d. **Water Quality Management (Part II) Permit / DRBC Docket.** The Water Quality Management Permit No. 1506407 approved by PADEP on October 31, 2012, includes final effluent limitations for the project discharge of 0.13768 mgd to land application via golf course irrigation and/or drip irrigation. The following average monthly effluent limits are among those listed in the permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in the WQM Permit.

Sampled from the Filtrate Tank		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by WQM permit
Total Suspended Solids	10 mg/l	As required by WQM permit
Total Nitrogen**	10 mg/l	As required by WQM permit
CBOD (5-Day at 20° C)	10 mg/l (85% minimum removal*)	As required by WQM permit
Fecal Coliform	200 colonies per 100 ml as a geo. avg.	As required by WQM permit

* DRBC Requirement

** DRBC *Water Quality Regulations* (WQR) include basin-wide ammonia-nitrogen effluent limits. Meeting the total nitrogen limit of 10 mg/l satisfies the DRBC criteria for ammonia-nitrogen.

EFFLUENT TABLE A-2: DRBC Parameters Not Included in WQM Permit.

Sampled from the Filtrate Tank		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	Monitor & Report	Quarterly**

* DRBC Requirement

** See DECISION Condition II.s.

e. **NPDES Permit / DRBC Docket.** NPDES Permit No. PA0244333 was issued by the PADEP on May 23, 2012, effective June 1, 2012, and includes final effluent limitations for the project discharge of 0.138 mgd to surface waters classified by the PADEP as a trout stocking/migratory fishery (TSF/MF). The following average monthly effluent limits are among

those listed in the NPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-3: DRBC Parameters Included in NPDES Permit

OUTFALL 001 (WWTP)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	30 mg/l	As required by NPDES Permit
CBOD (5-Day at 20° C)	25 mg/l (85% minimum removal*)	As required by NPDES Permit
Ammonia-Nitrogen	3.0 mg/l	As required by NPDES Permit
Fecal Coliform	200 colonies per 100 ml as a geo. avg.	As required by NPDES Permit

* DRBC Requirement

EFFLUENT TABLE A-4: DRBC Parameters Not Included in NPDES Permit

OUTFALL 001 (WWTP)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	Monitor & Report	Quarterly**

* DRBC Requirement

** See DECISION Condition II.s.

f. **Relationship to the Comprehensive Plan.** The DRBC included the EBTMA Applecross WWTP in the Comprehensive Plan on September 26, 2007 via Docket No. D-2007-2 CP-1.

B. FINDINGS

The Applecross WWTP was approved via Docket No. D-2007-2 CP-1 on September 26, 2007; however the docket holder did not submit an application for renewal prior to the docket expiration date of September 26, 2012.

This docket approves the docket renewal and directs the docket holder to notify the DRBC Executive Director prior to the third SBR unit being put into operation. Upon receiving this notification, the Executive Director may require the docket holder to submit an application to the DRBC for a docket modification (See the Condition II. n. in the Decision section of this docket).

The PADEP WQM Part II Permit limits the Applecross WWTP to an average flow of 0.13768 mgd. PADEP indicated that the EBTMA is preparing planning documents and PADEP expects to receive an application from the docket holder to amend the WQM Part II permit to increase the permitted treatment capacity of the WWTP by approximately 0.022 mgd. Condition II.a. of the Decision Section of this docket subjects Commission approval to all conditions, requirements and limitations imposed by the PADEP in its permit(s). The docket holder's discharge is limited to 0.13768 mgd until PADEP has approved the increased flows.

At the project site, Beaver Creek has an estimated seven-day low flow with a recurrence interval of ten years of 0.09 mgd (0.14 cfs). The ratio of this low flow to the design wastewater discharge from the 0.3 mgd WWTP is 0.3 to 1.

The nearest surface water intake of record for public water supply downstream of the project discharge is located approximately 10 miles downstream on the East Branch Brandywine Creek operated by Aqua Pennsylvania.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The limits in the WQM Permit and the NPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *Water Quality Regulations* of the DRBC.

C. DECISION

I. Effective on the approval date for Docket No. D-2007-002 CP-2 below:

- a. The project described in Docket No. D-2007-2 CP-1 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-2007-002 CP-2; and
- b. Docket No. D-2007-2 CP-1 is terminated and replaced by Docket No. D-2007-002 CP-2; and
- c. The project and the appurtenant facilities described in Section A “Physical Features” of this docket shall be continued in the Comprehensive Plan.

II. The project and appurtenant facilities as described in Section A “Physical Features” of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

- a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its NPDES and WQM permit and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.
- b. The facility and operational records shall be available at all times for inspection by the DRBC.
- c. The facility shall be operated at all times to comply with the requirements of the Commission’s *WQR*.

d. The docket holder shall comply with the requirements contained in the Effluent Tables in Sections A.4.d. and e. of this docket. The docket holder shall submit the required monitoring results directly to the DRBC Project Review Section. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations.

e. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

f. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

g. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

h. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams.

i. The discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 5°F, nor shall such discharge result in stream temperatures exceeding 87°F.

j. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served section of this docket, which incorporates by reference sections B (Type of Discharge) and D (Service Area) of the docket holder's Application to the extent consistent with all other conditions of this DECISION section.

k. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

l. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

m. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

n. Prior to the third SBR unit being put into operation, the docket holder is required to notify the DRBC Executive Director. Upon receiving this notification, the Executive Director may require the docket holder to submit an application to the DRBC for a docket

modification. Within 30 days of completion of construction of the third SBR unit, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement (“Statement”) signed by the docket holder’s professional engineer for the project.

o. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

p. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission’s Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

q. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director’s judgment such modification or suspension is required to protect the water resources of the Basin.

r. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the Rules of Practice and Procedure. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

s. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

t. Nothing in this docket constitutes a defense to any penalty action for past conduct of the docket holder or ongoing activity not authorized by this approval. In particular, renewal of this docket does not resolve violations – whether in the past or continuing – of provisions of the Delaware River Basin Compact (“Compact”) or any rule, regulation, order or approval duly issued by the Commission or the Executive Director pursuant to the Compact. The Commission reserves its right to take appropriate enforcement action against the docket

holder, including but not limited to recovery of financial penalties consistent with Section 14.17 of the Compact, for any and all such prior or continuing violations.

u. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

BY THE COMMISSION

DATE APPROVED:

EXPIRATION DATE: May 31, 2017